Claims:

1. An electrochemical cell in which an inner cylindrical electrode extends coaxially within a tube of ion-permeable material that is mounted coaxially within a hollow, cylindrical outer electrode to define inner and outer annular passageways between the respective electrodes and said tube for liquid-flow lengthwise of them from one to the other of cup-shape fittings at either end of the cell, each cup-shape fitting having two inlet/outlet ports that communicate with the inner and outer passageways respectively, wherein each cup-shape fitting defines a cylindrical cavity which has an open-mouth that is of a diameter to receive a respective end of the outer electrode for liquid-tight sealing therewith, said tube projects at each end of the cell from within the outer electrode into said cavity of the fitting at that end and has an annular rim for engagement with an internal cylindrical wall of the cavity for liquid-tight sealing therewith to separate the inner and outer passageways from one another within the fitting, and the inner electrode projects at each end of the cell from said tube into the cavity of the fitting at that end.

2. An electrochemical cell according to Claim 1 wherein the outer electrode is a metal tube.

3. An electrochemical cell according to Claim 1 or Claim 2 wherein the inner electrode is a metal rod.

4. An electrochemical cell according to any one of Claims 1 to 3 wherein the particular one of the electrodes that is to act as the cathode of the cell, is of titanium or stainless steel.

5. An electrochemical cell according to any one of Claims 1 to 4 wherein the particular one of the electrodes that is to act as the anode of the cell is of titanium.

6. An electrochemical cell according to Claim 5 wherein the anode electrode has a coating that acts as a catalyst in the electrochemical operation of the cell.

7. An electrochemical cell according to Claim 6 wherein the coating of the anode electrode is of ruthenium and iridium oxides.

8. An electrochemical cell according to any one of Claims 1 to 7 wherein the ion-permeable tube is of a porous ceramic material.

9. An electrochemical cell according to Claim 8 wherein the ceramic material is composed of aluminium, zirconium and yttrium oxides.

10. An electrochemical cell according to any one of Claims 1 to 9 wherein the annular rim at each end of the cell is slidable within the cavity of the fitting at that end to enable sliding of the ion-permeable tube relative to the inner and outer electrodes.

11. An electrochemical cell according to Claim 10 wherein the annular rim at each end of the cell comprises a flange of a member that is sealed or otherwise secured to the ion-permeable tube at that end.

12. An electrochemical cell according to Claim 10 or Claim 11 wherein the extent to which the ion-permeable tube can slide relative to the inner and outer electrodes is limited by abutment within the cavity at each end of the cell.

13. An electrochemical cell according to any one of Claims 1 to 12 wherein the cavity of each cup-shape fitting has a stepped internal diameter for defining a first cavity-part leading from the open mouth and a second cavity-part of smaller diameter opening from the first cavity-part.

14. An electrochemical cell according to Claim 13 wherein the ion-permeable tube projects at each end of the cell from within the outer electrode into the first cavity-part of the fitting at that end to have its annular rim engage with the internal cylindrical wall of the first cavity-part, and the inlet/outlet ports of each fitting open into/from the first and second cavity-parts respectively.